

CLAIMS

What is claimed is:

1. A method of manufacturing a membrane with a double layer membrane wall whose layers consist of different polymers or, respectively, polymer mixtures and whose one surface is blood-compatible whereas the other surface is tissue-compatible, said method comprising the steps of:  
preparing a first polymer solution which contains a blood-compatible polymer and a second polymer solution which contains a tissue-compatible polymer separately from each other by dissolving the respective polymer in a solvent such that both polymer solutions remain in the form of polymer mixture solutions in a homogeneous state,  
bringing the two polymer solutions into contact with each other in the nozzle of an extruder so as to form a layered polymer solution compound arrangement,  
and extruding the two polymer solution compound arrangement from the nozzle of the extruder into a coagulation bath where it is subject to a phase inversion so as to form a double layer membrane and

the formed double layer membrane is at least partially freed, in a manner known per se, from all non-membrane forming components.

2. A method of manufacturing a membrane according to claim 1, wherein, before the extrusion into the coagulation bath, the membrane is passed through an air space.

3. A method of manufacturing a membrane according to claim 1, in the form of a double layer hollow membrane, wherein as extruder a spin extrusion nozzle is used.

4. A method of manufacturing a membrane according to claim 3, wherein as an extruder nozzle a multi-channel hollow core nozzle is used.

5. A method of manufacturing a membrane according to claim 3, wherein the polymer solution compound arrangement at the exit of the extrusion nozzle is stabilized in its form by the concurrent extrusion of a lumen filler forming the hollow core.

6. A method of manufacturing a membrane according to claim 3, wherein the polymer material forming the inner surface of the hollow membrane is blood-compatible and the polymer forming the outer surface is tissue-compatible.

7. A method of manufacturing a membrane according to claim 1, wherein a first and a second polymer solution are used which both include the same solvent.

8. A method of manufacturing a membrane according to claim 1, wherein a first and a second polymer solution are used which include an additional polymer which is the same in both polymer solutions.

9. A method of manufacturing a membrane according to claim 8, wherein the mass content of blood-compatible and, respectively, tissue-compatible polymers and the additional polymer in the total polymer content of the respective polymer solution is 10 to 90%, and particularly 40 to 60%.

10. A method of manufacturing a membrane according to claim 1, wherein the concentration of the polymer in the first and second polymer solutions each is 10 to 30%.